

Amendments to the Claims:

The following claims will replace all prior versions of the claims in this application:

1. (Currently Amended) A computerized method for creating test item models and generating test item variants comprising:

obtaining a test item;

creating a test item model by:

identifying elements of the test item to be variabilized,

variabilizing the elements to create variables, and

defining the variables; [[and]]

receiving a plurality of constraints for a test item variant; and

generating [[a]] the test item variant of the test item using a processor by assigning generating values [[to]] for the variables using a simultaneous constraint solver, wherein the simultaneous constraint solver resolves the [[a]] plurality of constraints pertaining to the variables.

2. (Previously Presented) The method according to claim 1, wherein said model creation further comprises specifying constraints that define a relationship among the variables.

3. (Previously Presented) The method according to claim 2 further comprising accepting and retrievably storing the test item variant.

4. (Previously Presented) The method according to claim 3 further comprising accepting and retrievably storing the test item model.

5. (Currently Amended) A computerized method for generating test item variants, the method comprising:

identifying elements of a test item or a test item model to be variabilized;

variabilizing the identified elements;

defining the variables;

specifying constraints for the variables;

using a simultaneous constraint solver to determine generate values for the variables based on the constraints using a processor; and

generating a test item variant with the determined values.

6-12. (Cancelled)

13. (Currently Amended) A computerized method for generating test item variants from test item models comprising:

retrievably storing test item models;

selecting a test item model;

simultaneously solving test item model constraints pertaining to using a processor to generate values for variables of the selected test item model and generating test item solutions based on the selected test item model; and

displaying, accepting and retrievably storing valid test item solutions.

14. (Previously Presented) The computerized method of claim 13 wherein retrievably storing test item models comprises:

- obtaining a test item;
- identifying elements of the test item to be variabilized;
- variabilizing the elements to create the variables;
- defining the variables; and
- accepting the variabilized test item with defined variables as a test item model.

15. (Previously Presented) The computerized method of claim 13 further comprising specifying constraints that define the relationship among the variables.

16. (Previously Presented) The computerized method of claim 14 further comprising displaying and retrievably storing the accepted test item model.

17. (Original) The computerized method of claim 14 wherein the test item model constraints are simultaneously solved using PROLOG IV and Test Creation Assistant constraint language.

18. (Cancelled)

19. (Original) The computerized method of claim 14 wherein variables can be defined by values which are variables.

20. (Original) The computerized method of claim 15 wherein the variables are new variables for which new constraints are defined as needed.

21. (New) A computerized system for creating test item models and generating test item variants comprising:

a computer including a memory, wherein the computer is configured to execute a method comprising:

obtaining a test item;

creating a test item model by:

identifying elements of the test item to be variabilized,

variabilizing the elements to create variables, and

defining the variables;

receiving a plurality of constraints for a test item variant; and

generating the test item variant of the test item using a processor by generating values for the variables using a simultaneous constraint solver, wherein the simultaneous constraint solver resolves the plurality of constraints pertaining to the variables.

22. (New) The system according to claim 21, wherein the model creation further comprises specifying constraints that define a relationship among the variables.

23. (New) The system according to claim 22, wherein the method further comprises accepting and retrievably storing the test item variant.

24. (New) The system according to claim 23, wherein the method further comprises accepting and retrievably storing the test item model.

25. (New) A computerized system for generating test item variants, comprising:

a computer including a memory, wherein the computer is configured to execute a method comprising:

identifying elements of a test item or a test item model to be variabilized;

variabilizing the identified elements;

defining the variables;

specifying constraints for the variables;

using a simultaneous constraint solver to generate values for the variables based on the constraints using a processor; and

generating a test item variant with the determined values.

26. (New) A computerized system for generating test item variants from test item models, comprising:

a computer including a memory, wherein the computer is configured to execute a method comprising:

retrievably storing test item models;

selecting a test item model;

simultaneously solving test item model constraints using a processor to generate values for variables of the selected test item model and generating test item solutions based on the selected test item model; and
displaying, accepting and retrievably storing valid test item solutions.

27. (New) The computerized system of claim 26, wherein retrievably storing test item models comprises:

obtaining a test item;
identifying elements of the test item to be variabilized;
variabilizing the elements to create the variables;
defining the variables; and
accepting the variabilized test item with defined variables as a test item model.

28. (New) The computerized system of claim 26, wherein the method further comprises specifying constraints that define the relationship among the variables.

29. (New) The computerized system of claim 27, wherein the method further comprises displaying and retrievably storing the accepted test item model.

30. (New) The computerized system of claim 27, wherein the test item model constraints are simultaneously solved using PROLOG IV and Test Creation Assistant constraint language.

31. (New) The computerized system of claim 26, wherein variables can be defined by values which are variables.

32. (New) The computerized system of claim 27 wherein the variables are new variables for which new constraints are defined as needed.

33. (New) The computerized method of claim 1, wherein the simultaneous constraint solver resolves all of the plurality of constraints pertaining to the variable.